

What is claimed is:

1. A coated optical fiber capable of transmitting high-power light, which is an optical fiber having an outer surface coated with a coating material, wherein

the coating material is made of a transparent UV curable resin so as to prevent the coating material from absorbing light leaked outside from the optical fiber to generate heat.

2. The coated optical fiber as claimed in claim 1, wherein the transparent UV curable resin of the coating material is replaced with a semitransparent UV curable resin.

3. A coated optical fiber capable of transmitting high-power light, which is an optical fiber having an outer surface coated sequentially with a primary coating layer made of a UV curable resin, a secondary coating layer made of a UV curable resin and a colored layer, wherein

said colored layer partially coats an outer surface of said secondary coating layer.

4. The coated optical fiber as claimed in claim 3, wherein said colored layer partially coating the outer surface of said secondary coating layer is formed in stripes.

5. The coated optical fiber as claimed in claim 3,

wherein said colored layer partially coating the outer surface of said secondary coating layer is formed in spiral stripes.

6. The coated optical fiber as claimed in any one of claims 1 through 5, wherein the high-power light is light of at least 500 mW.

7. An optical fiber package wherein a coated optical fiber as claimed in any one of claims 1 through 6 is housed in a package member which has a light absorbing layer on an inner surface of the package member.

8. An optical device using a coated optical fiber as claimed in any one of claims 1 through 6.

9. A light transmitting method wherein a fiber fuse propagation threshold which is a minimal light output required for fiber fuse propagation is obtained and a transmitted light output is controlled so that the transmitted light output becomes smaller than the fiber fuse propagation threshold.

10. An optical amplifier controlling method comprising the steps of:

monitoring a branched small amount of output light from an optical amplifier;

comparing a monitored value with a preset fiber fuse

propagation threshold; and

when the monitored value is smaller than the fiber fuse propagation threshold, providing instructions to maintain or increase the output light of the optical amplifier and when the monitored value is equal to or larger than the fiber fuse propagation threshold, providing instructions to reduce the output light of the optical amplifier.

11. The optical amplifier controlling method as claimed in claim 10, wherein reducing of the output light of the optical amplifier is performed by reducing a light output of every wavelength of wavelength-division-multiplexed light by a small amount.